UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MISSOURI
EASTERN DIVISION

UNITED STATES OF AMERICA,	)	
	)	
Plaintiff,	)	
	)	
and	)	
	)	
SIERRA CLUB,	)	No. 4:11 CV 77 RWS
	)	
Plaintiff-Intervenor,	)	
	)	
vs.	)	
	)	
AMEREN MISSOURI,	)	
	)	
Defendant.	)	

MEMORANDUM & ORDER

Plaintiff Environmental Protection Agency (EPA) moves to exclude the opinions of Ameren's expert witness Colin Campbell. The EPA provides evidence that Campbell ignored his own advice, EPA manuals, and accepted practice when developing his best available control technology (BACT) analyses. Although these arguments affect the credibility of Campbell's testimony, I cannot say that Campbell's methods are so unreliable that they should be excluded under Daubert. Additionally, I cannot conclude that Campbell's opinion concerning "avoidance theory" is irrelevant, as a matter of law. As a result, I will deny EPA's motion to exclude Campbell's opinion.

BACKGROUND

On January 23, 2017, after a bench trial, I found that Ameren violated the Clean Air Act, 42 U.S.C. § 7401 et seq., by failing to obtain a permit before making major modifications to its Rush Island Plant. (ECF No. 852).

The liability and remedies phases of this case were severed. At the remedy phase trial, Ameren seeks to introduce the expert testimony of Colin Campbell. Campbell is the vice president of RTP Environmental Associates, Inc. (Campbell Deposition, filed under seal at No. 968-5 at 7:15-21). Campbell's expert disclosure report includes two opinions discussed by the parties: 1) that a current BACT determination would designate dry sorbent injection (DSI) as BACT; and 2) that Ameren should not be required to obtain a prevent significant deterioration (PSD) permit under "avoidance theory." Campbell asserts that, if Ameren had known the consequences of its major modifications, it would have chosen to obtain a minor permit instead.

The EPA argues Campbell does not use reliable methods in reaching these opinions, specifically that he skips three of the five steps undertaken in any BACT analysis. The EPA also argues that Campbell conducts an unreliable incremental cost effectiveness analysis, a method that should only be used when dominant control options have similar cost effectiveness. Ameren argues that Campbell's

method is consistent with the MDNR's permitting process, and that the MDNR has rejected wet flue gas desulfurization (FGD) using similar methods.

LEGAL STANDARD

Pursuant to Federal Rule of Evidence 702 and Daubert, I must "ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589, (1993). Expert testimony must be excluded if its reasoning or methodology is either unreliable or unreliably applied to the facts of the case. Id. 592-93. "[A]ny step that renders the analysis unreliable under . . . Daubert . . . renders the expert's testimony inadmissible." McClain v. Metabolife Int'l, Inc., 401 F.3d 1233, 1245 (11th Cir. 2005). The burden is on the party offering the expert testimony to prove that it is reliable. Wagner v. Hesston Corp., 450 F.3d 756, 758 (8th Cir. 2006). This standard applies to all expert testimony, whether "scientific, technical, or other specialized" knowledge. Kumho Tire Co. v. Carmichael, 526 U.S. 137, 147-48 (1999). The objective of these requirements are to make sure that experts "employ[] in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field." Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152 (1999). Even so, "Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony. . . .The rule clearly is one of

admissibility rather than exclusion." Lauzon v. Senco Prod., Inc., 270 F.3d 681, 686 (8th Cir. 2001) (internal citations and quotations removed).

ANALYSIS

I. Campbell's Opinions Concerning BACT Determinations

The EPA argues that Campbell fails to use the same intellectual rigor that professionals use when conducting a BACT analysis. As acknowledged by Campbell (Campbell deposition, filed under seal at ECF No. 968-5 at 196:11-18)[1], permit applications and permit support documents typically involve a five-step process. Under that five-step process, one should (1) identify all potentially available control options, (2) eliminate any options that are not demonstrated, available, or applicable, (3) rank all available control technologies based on the amount of pollution they remove, (4) evaluate the energy, environmental, and economic impacts of the highest-ranked control technology, and (5) if the highest ranked technology is not appropriate, eliminate it and evaluate the next-highest ranked technology. In Re: Northern Michigan University Ripley Heating Plant, 14 E.A.D. 283, 2009 WL 443976, at *9-10 (Feb. 18, 2009).

As part of step 4, a BACT analysis may include evaluation of "incremental cost effectiveness," and average cost effectiveness. See In Re: General Motors, Inc. Permit no. MI-209-00, 10 E.A.D. 360, 2002 WL 373982, at *9. Incremental cost

[1] Explaining that Campbell was not asked to do a BACT analysis for a permit application, as would require documentation of the five steps.

effectiveness represents the additional cost per unit of pollutant removed when comparing two control technologies ranked directly adjacent to each other. Id. at *10. Average cost effectiveness represents the total cost of an option per unit of pollutant removed, without reference to other options. Id. at *9.

Instead of following this five-step process, Campbell made an abbreviated analysis. He considered four possible control technologies. Although he appears to have ranked them, he did not evaluate them in order of rank. Instead he eliminated the second- and third-highest ranked options after what he calls a "cursory consideration." (ECF No. 968-5 at 202:11-203:12). Specifically, Campbell considered wet FGD, dry FGD with a baghouse, dry sorbent injection (DSI) with a baghouse, and DSI without a baghouse. Campbell eliminated dry FGD with a baghouse because it would be more costly than wet FGD, and therefore could not be the "dominant" control technology. (Id. at 202:3-13). Similarly, he eliminated DSI with a baghouse because it was less effective than dry FGD, but still required an expensive baghouse. (Id. at 203:8-12). "No real analysis [was] necessary," in Campbell's view. (Id. at 203:8).

Campbell then evaluated the incremental cost effectiveness of the highest-ranking technology, wet FGD, against the only other technology remaining, DSI without a baghouse. Campbell found that the incremental cost effectiveness exceeded $6,800, a threshold he purports represents an upper limit on the BACT

determinations that the MDNR has made. (Campbell deposition, filed under seal at 968-5, ECF No. 968-5 282:10-283:6). For that reason, Campbell rejected wet FGD, and chose the remaining technology, DSI without a baghouse, as BACT.

These methods depart significantly from the five-step process used in preparing a permit application or supporting documents. (Campbell deposition, filed under seal at ECF No. 968-5 at 196:11-18). Most importantly, Campbell eliminated the second-highest and third-highest ranking options before evaluating the first-highest ranking option. As a result, Campbell's incremental cost effectiveness compared the highest and lowest ranking options. This error violates Campbell's own advice to permit engineers. (BACT workshop presentation, filed under seal at ECF No. 970 at 3, 5-6). In his BACT workshop presentation, Campbell explained that incremental cost effectiveness should be performed between the " 'dominant' control option [and] the next most stringent option." (Id. at 3). He cautioned that incremental cost is appropriate when "[D]ominant control options have similar average cost effectiveness numbers" or similar emission rate reductions. (Id. at 5).

Despite these inconsistencies, Ameren argues that Campbell's method is reliable, because his departures from the five-step process reflect the MDNR's departures from the five-step process. To support this argument, Ameren cites an MDNR permit issued for the Noranda aluminum smelter, where the MDNR

rejected wet FGD in favor of operational changes as BACT. (ECF No. 999-2 at 119:12-120:20; ECF No. 969-6). In its BACT analysis for Noranda, the MDNR first rejected wet FGD because its average cost effectiveness was considered too great. (ECF No. 969-6 at 5-6). The MDNR then rejected dry FGD because "heating the exhaust gas . . . would require combustion of additional fuel, creating additional pollutants." (Id. at 6).

Although I am skeptical of Ameren's arguments, I cannot say that Campbell's opinion is so unreliable that it should be excluded under Daubert. Campbell reliably uses two of the five steps outlined in EPA's Draft NSR Manual. The manual itself does not have the force of law, although its framework is relevant to establishing the "level of intellectual rigor that characterizes the practice of an expert in the relevant field." Kumho Tire Co. v. Carmichael, 526 U.S. 137, 152. Campbell's opinion would be more credible if he had completed and documented the five steps in order. However, credibility is an issue for the factfinder at trial. United States v. Vesey, 338 F.3d 913, 917 (8th Cir. 2003) ("The gatekeeper role should not, however, invade the province of the jury, whose job it is to decide issues of credibility and to determine the weight that should be accorded evidence."). Additionally, in a borderline circumstance such as this, "[i]t is far better … to allow the expert opinion[,] and if the court remains unconvinced, allow the jury to pass on the evidence." Lauzon v. Senco Prod., Inc., 270 F.3d 681,

695 (8th Cir. 2001). As a result, I will deny the EPA's Daubert motion with respect to Campbell's BACT analysis.

II. Campbell's Opinion Concerning Minor Permits

In Campbell's remaining opinion, he suggests that BACT is not an appropriate remedy for Rush Island. Campbell argues that Ameren could have adopted an "avoidance strategy" to make a PSD permit and related BACT analysis unnecessary. In his report, Campbell outlines three means by which Ameren could have constrained emissions at Rush Island while avoiding a PSD permit. Ameren wants me to consider these "avoidance measures" when I evaluate what equitable remedies may be appropriate in this case.

Ameren provides no cases where a court has applied PSD avoidance theory to a defendant who has already made a major modification. Instead, Ameren argues that fairness requires that it have all the opportunities for compliance now as it did before it overhauled its boilers at Rush Island. Other courts have rejected similar arguments. See United States v. Westvaco Corp., No. CV MJG-00-2602, 2015 WL 10323214, at *8 (D. Md. Feb. 26, 2015) ("Westvaco asserts that if it had known that the DEP would trigger a PSD review and BACT emissions limits, it would have altered the project in order to avoid triggering PSD. However, Westvaco pursued the DEP taking the chance that it could avoid a PSD review. 'This was a risky strategy,' . . .")

Although I am skeptical of Ameren's argument, I have not conducted the required eBay factor analysis to determine an appropriate remedy in this case. eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006). As a result I cannot determine that Campbell's opinion concerning the appropriateness of a BACT remedy is irrelevant, as argued by the EPA.

Accordingly,

IT IS HEREBY ORDERED that EPA's motion to exclude Colin Campbell's expert opinion, [No. 952], is **DENIED**.

RODNEY W. SIPPEL
UNITED STATES DISTRICT JUDGE

Dated this 27th day of March, 2019.